REMARKS

Claims 1-80 are pending in the present application. In the Office Action, the Examiner objected to claims 5-6, 13, 18-19, 27, 33-34, 37, 48-49, 63-64, 67, and 64 for allegedly failing to further limit the subject matter of a previous claim. Applicants respectfully disagree for the following reasons.

With regard to the Examiner's objection to claims 5-6, claims 4 sets forth, among other things, encrypting biometric data using a secret. Applicants note that claim 4 does not exclude encrypting the biometric data using information in addition to the secret. Claim 5 further limits claim 4 by setting forth encrypting the biometric data using the secret and the nonce. Claim 6 further limits claim 5 by setting forth encrypting the biometric data using the GUID, the secret, and the nonce.

With regard to the Examiner's objection to claim 13, claims 12 sets forth, among other things, encrypting biometric data using a GUID. Applicants note that claim 12 does not exclude encrypting the biometric data using information in addition to the GUID. Claim 13 further limits claim 12 by setting forth encrypting the biometric data using the GUID and the nonce.

With regard to the Examiner's objection to claims 18-19, claims 17 sets forth, among other things, encrypting biometric data using a secret and decrypting the biometric data using the secret. Applicants note that claim 17 does not exclude encrypting the biometric data using information in addition to the secret. Claim 18 further limits claim 17 by setting forth encrypting the biometric data using the secret and the nonce and decrypting the biometric data using the secret and the nonce. Claim 19 further limits claim 18 by setting forth encrypting the biometric data using the GUID, the secret, and the nonce.

With regard to the Examiner's objection to claim 27, claims 26 sets forth, among other things, encrypting biometric data using a GUID. Applicants note that claim 26 does not exclude encrypting the biometric data using information in addition to the GUID. Claim 27 further limits claim 26 by setting forth encrypting the biometric data using the GUID and the nonce.

With regard to the Examiner's objection to claims 33-34, claims 32 sets forth, among other things, encrypting biometric data using a secret and decrypting the biometric data using the secret. Applicants note that claim 32 does not exclude encrypting and/or decrypting the biometric data using information in addition to the secret. Claim 33 further limits claim 32 by setting forth encrypting the biometric data using the secret and the nonce and decrypting the biometric data using the secret and the nonce. Claim 34 further limits claim 33 by setting forth encrypting the biometric data using the GUID, the secret, and the nonce and decrypting the biometric data using the GUID, the secret, and the nonce.

With regard to the Examiner's objection to claim 37, claims 36 sets forth, among other things, encrypting biometric data using a system GUID and decrypting the biometric data using the system GUID. Applicants note that claim 36 does not exclude encrypting and/or decrypting the biometric data using information in addition to the GUID. Claim 37 further limits claim 36 by setting forth encrypting biometric data using a system GUID and the nonce and decrypting the biometric data using the system GUID and the nonce.

With regard to the Examiner's objection to claims 48-49, claims 47 sets forth, among other things, encrypting biometric data using a secret and decrypting the biometric data using the secret. Applicants note that claim 47 does not exclude encrypting and/or decrypting the biometric data using information in addition to the secret. Claim 48 further limits claim 47 by setting forth encrypting the biometric data using the secret and a random number and decrypting the biometric

data using the secret and the random number. Claim 49 further limits claim 48 by setting forth encrypting the biometric data using the GUID, the secret, and the random number and decrypting the biometric data using the GUID, the secret, and the random number.

With regard to the Examiner's objection to claims 63-64, claims 62 sets forth, among other things, encrypting biometric data using a secret and decrypting the biometric data using the secret. Applicants note that claim 62 does not exclude encrypting and/or decrypting the biometric data using information in addition to the secret. Claim 63 further limits claim 62 by setting forth encrypting the biometric data using the secret and the nonce and decrypting the biometric data using the secret and the nonce. Claim 64 further limits claim 63 by setting forth encrypting the biometric data using the GUID, the secret, and the nonce and decrypting the biometric data using the GUID, the secret, and the nonce.

With regard to the Examiner's objection to claim 67, claim 66 sets forth, among other things, encrypting biometric data using a GUID and decrypting the biometric data using the GUID. Applicants note that claim 32 does not exclude encrypting and/or decrypting the biometric data using information in addition to the GUID. Claim 67 further limits claim 66 by setting forth encrypting biometric data using a GUID and the nonce and decrypting the biometric data using the GUID and the nonce.

With regard to the Examiner's objection to claim 74, claims 73 sets forth, among other things, encrypting biometric data using a GUID and decrypting the biometric data using the GUID. Applicants note that claim 73 does not exclude encrypting and/or decrypting the biometric data using information in addition to the GUID. Claim 74 further limits claim 73 by setting forth encrypting biometric data using a GUID and the nonce and decrypting the biometric data using the GUID and the nonce.

For at least the aforementioned reasons, Applicants respectfully request that the Examiner's objections to claims 5-6, 13, 18-19, 27, 33-34, 37, 48-49, 63-64, 67, and 64 be withdrawn.

In the Office Action, claims 3, 16, 31, 35, 46, 50, 61, 65, and 68 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner alleges that the limitation "at least an indication" renders the claims indefinite. Applicants respectfully disagree and note that the terminology "at least an indication" implies that additional information not specifically set forth in the claim may also be included, if desired. For example, claim 3 sets forth transmitting at least an indication of a secret with biometric data. Thus, additional information may also be transmitted with the biometric data, although it is not necessary to transmit any additional information. Applicants respectfully submit that claims 3, 16, 31, 35, 46, 50, 61, 65, and 68 are definite and request that the Examiner's rejections of claims 3, 16, 31, 35, 46, 50, 61, 65, and 68 under 35 U.S.C. § 112, second paragraph, be withdrawn.

In the Office Action, claims 1-2, 4, 7-12, 14-17, 20-24, 26, 28-32, 35-36, 38-47, 50-62, 65-66, 68-71, 73, and 75-80 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Gennaro (U.S. Patent No. 6,317,834). Claims 25 and 72 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gennaro in view of Huang (U.S. Patent No. 5,856,789). The Examiner's rejections are respectfully traversed.

Independent claims 1, 14, 28, 58, and 75 set forth, among other things, a nonce. As defined in the specification and known to persons of ordinary skill in the art, a nonce is a number generated to be used a single time to verify an identity. The nonce is typically a random number that links pairs of messages together for authentication purposes. Nonces may be used to

overcome known vulnerabilities of passwords, in particular the fact that passwords are often used multiple times and therefore may be discovered by an unauthorized third party and used by the unauthorized third party. Nonces may also be used to help prevent replay attacks. See Patent Application, page 35, ll. 16-21. Independent claims 43 and 78 set forth, among other things, providing a random number, receiving biometric data, and <u>authenticating the biometric data using the random number</u>.

Gennaro describes capturing biometric information along with personal information unique to an individual. The biometric data may then be encrypted using <u>a random encryption key</u>, which may be generated from a <u>password</u> provided by the individual. However, Applicants respectfully submit that Gennaro fails to teach or suggest <u>a nonce</u>, as described above and set forth in independent claims 1, 14, 28, 58, and 75. Gennaro also fails to teach or suggest <u>authenticating biometric data using a random number</u>, as set forth in claims 43 and 78.

For at least the aforementioned reasons, Applicants respectfully submit that the present invention is not anticipated by Gennaro and request that the Examiner's rejections of claims 1-2, 4, 7-12, 14-17, 20-24, 26, 28-32, 35-36, 38-47, 50-62, 65-66, 68-71, 73, and 75-80 under 35 U.S.C. 102(e) be withdrawn.

Moreover, it is respectfully submitted that the pending claims are not obvious in view of the prior art of record. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) <u>must teach or suggest all the claim limitations</u>. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). As discussed above, Gennaro fails to teach or suggest <u>a nonce</u>, as described above and set forth in independent claims 1, 14, 28, 58, and 75. Gennaro also fails to teach or suggest <u>authenticating biometric data using a random number</u>, as set forth in claims 43 and 78. In rejecting claims 25 and 72, which depend from Claims 14 and

58, respectively, the Examiner relies upon Huang to teach a computer system containing a processor, a north bridge, and a south bridge. However, Huang fails to remedy the aforementioned efficiencies of the primary reference.
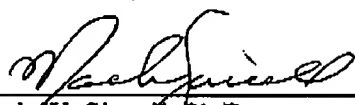
The cited references also fail to provide any suggestion or motivation to modify the prior art to arrive at the claimed invention. To the contrary, Gennaro teaches away from the Examiner's proposed modification of the prior art. In particular, Gennaro teaches that the biometric data should be encrypted using a random encryption key generated based upon a password. As discussed above, nonces are used a single time, whereas passwords may be used multiple times and are therefore vulnerable to discovery by unauthorized third parties. Thus, teaching that biometric data should be encrypted based on a password teaches away from using a nonce. It is by now well established that teaching away by the prior art constitutes *prima facie* evidence that the claimed invention is not obvious. *See, inter alia, In re Fine,* 5 U.S.P.Q.2d (BNA) 1596, 1599 (Fed. Cir. 1988); *In re Nielson,* 2 U.S.P.Q.2d (BNA) 1525, 1528 (Fed. Cir. 1987); *In re Hedges,* 228 U.S.P.Q. (BNA) 685, 687 (Fed. Cir. 1986).

For at least the aforementioned reasons, Applicants respectfully submit that the present invention is not anticipated by Gennaro or Huang, either alone or in combination. Applicants request that the Examiner's rejection of claims 25 and 72 under 35 U.S.C. 103(a) be withdrawn.

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4052 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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